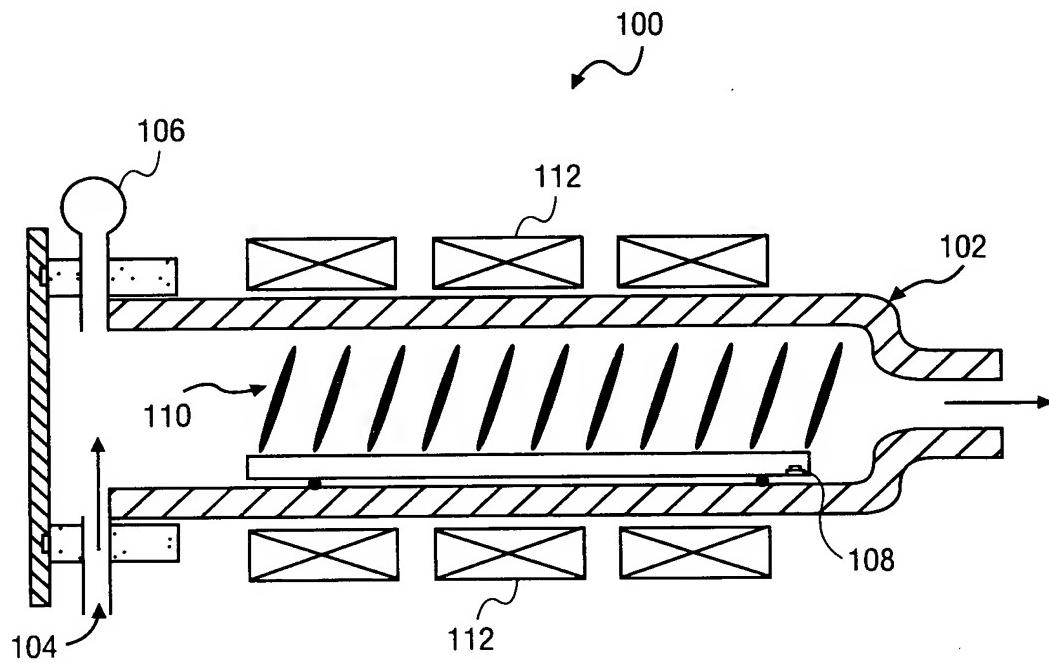


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**FIG. 1**  
(PRIOR ART)

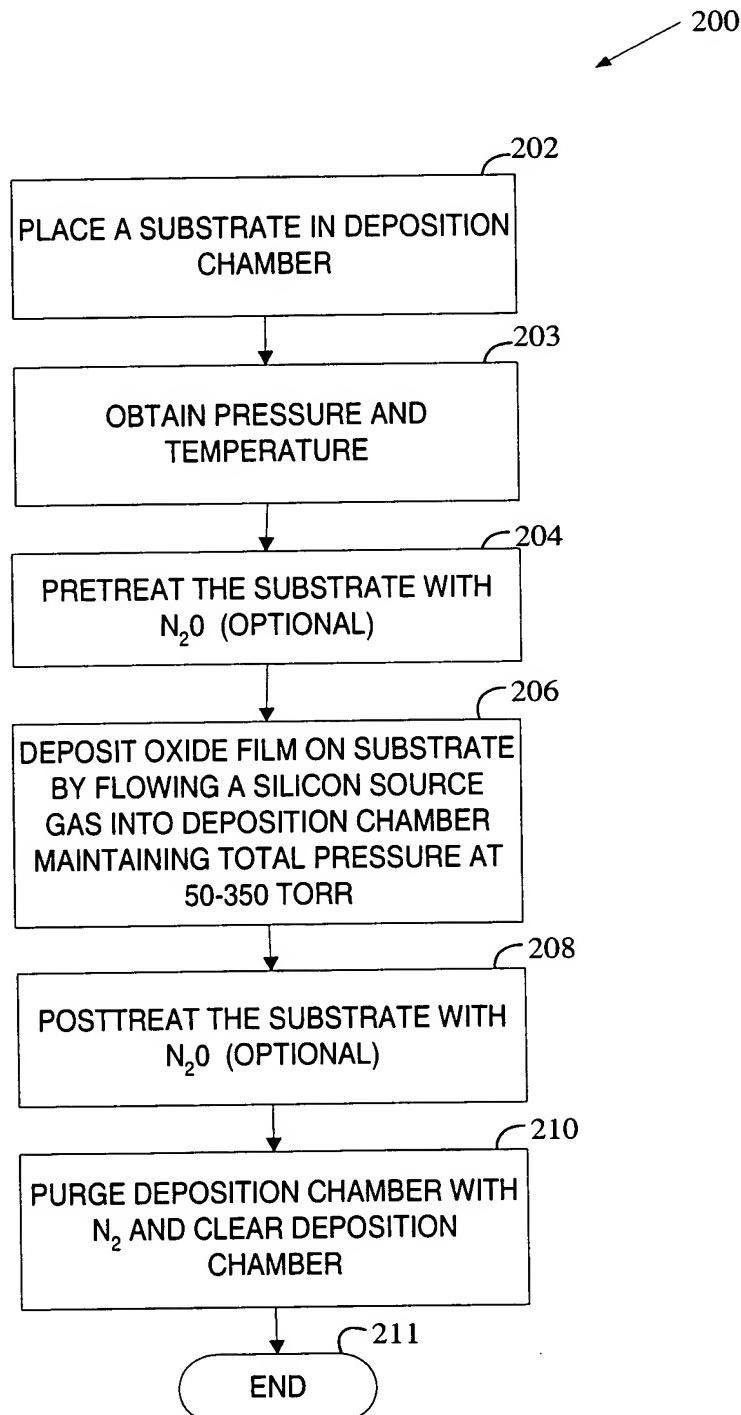


FIG. 2

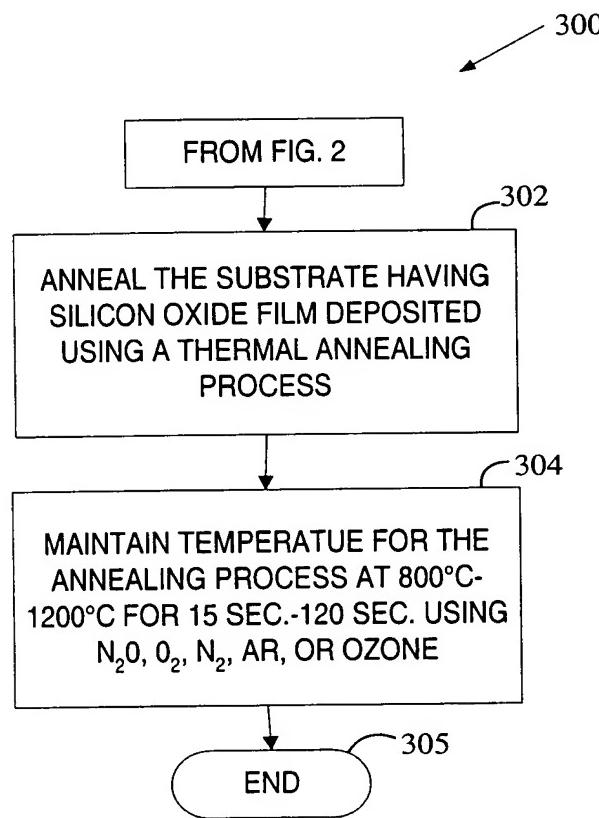
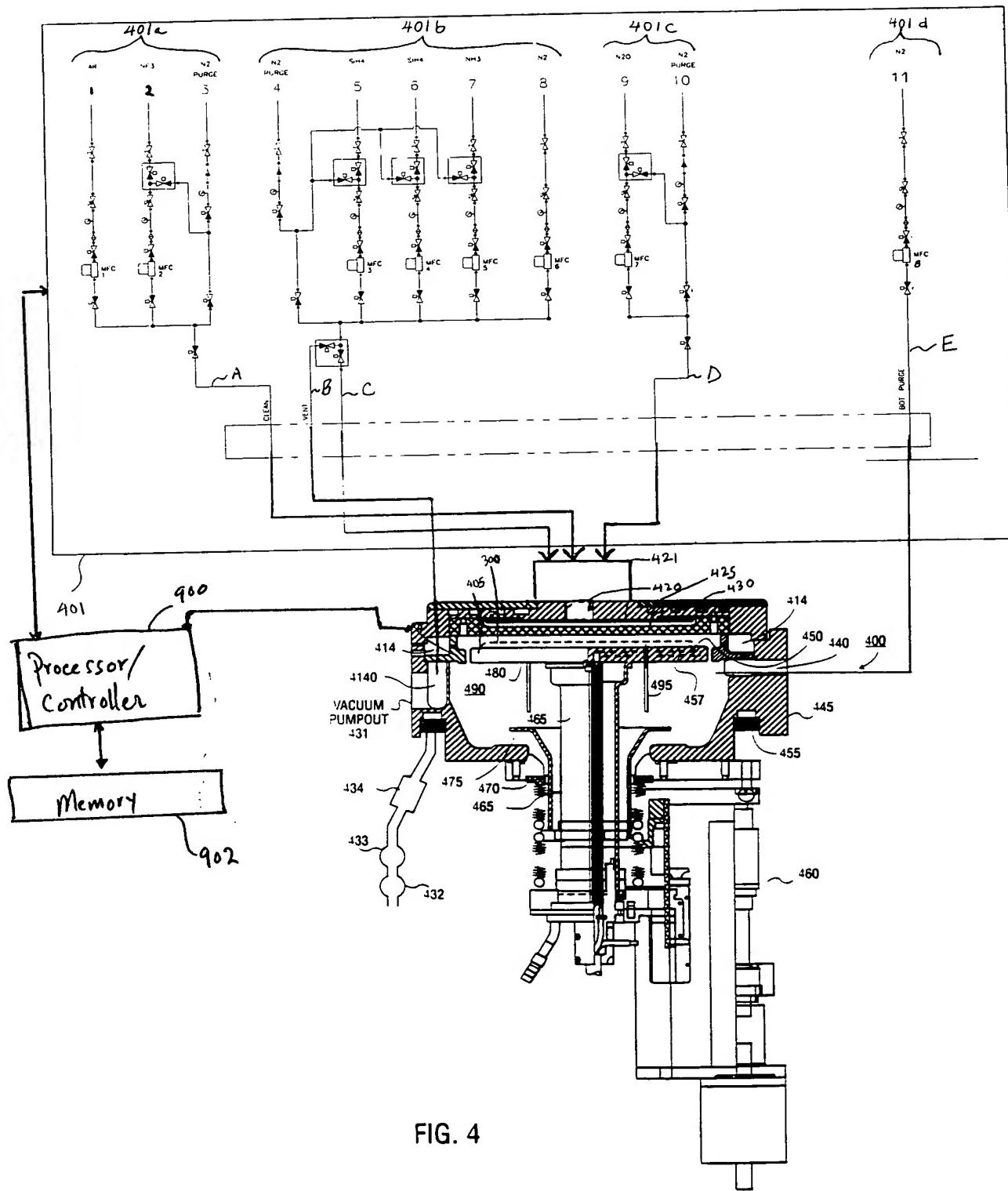


FIG. 3



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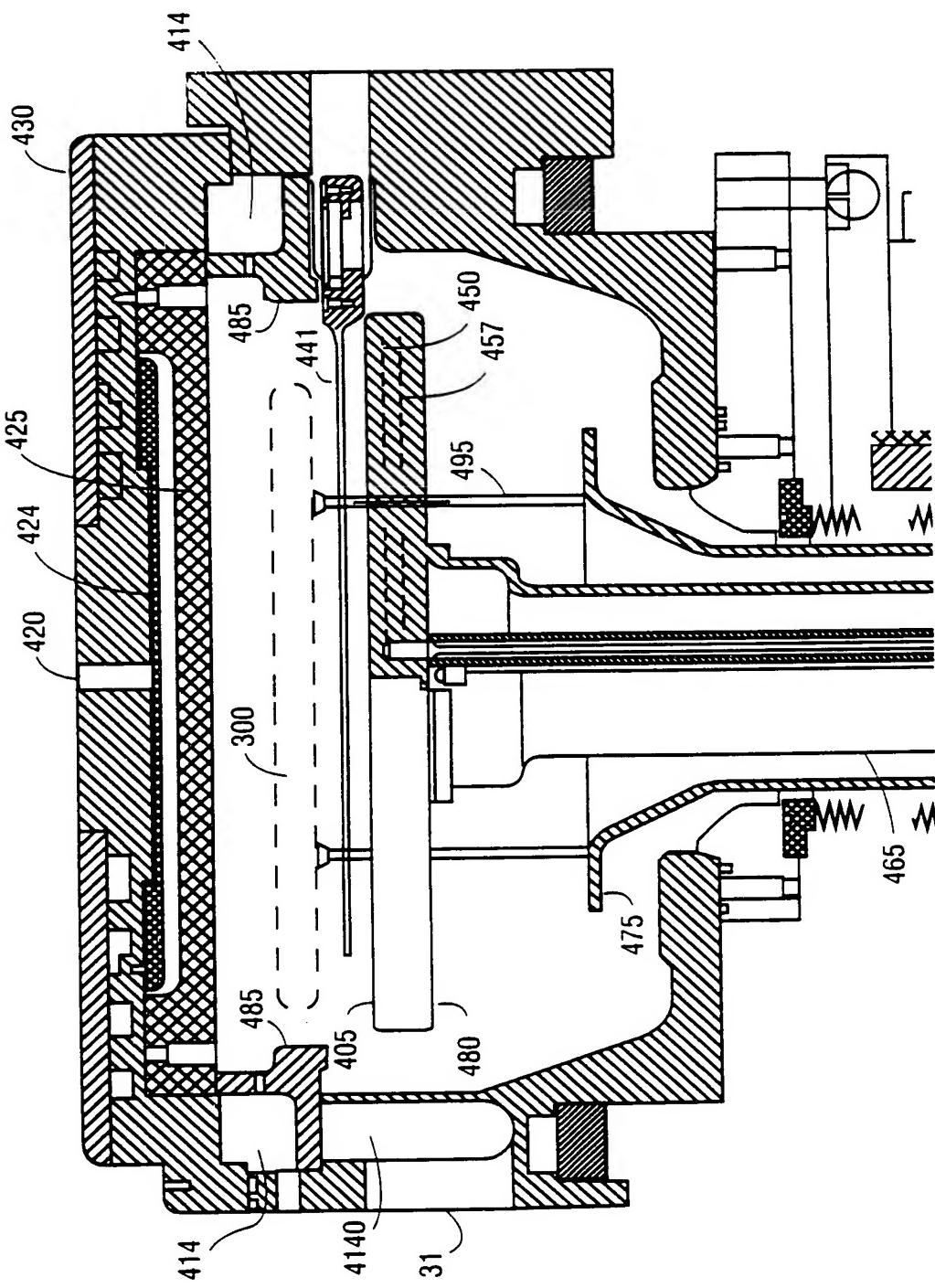


FIG. 5

TELETYPE SYSTEM

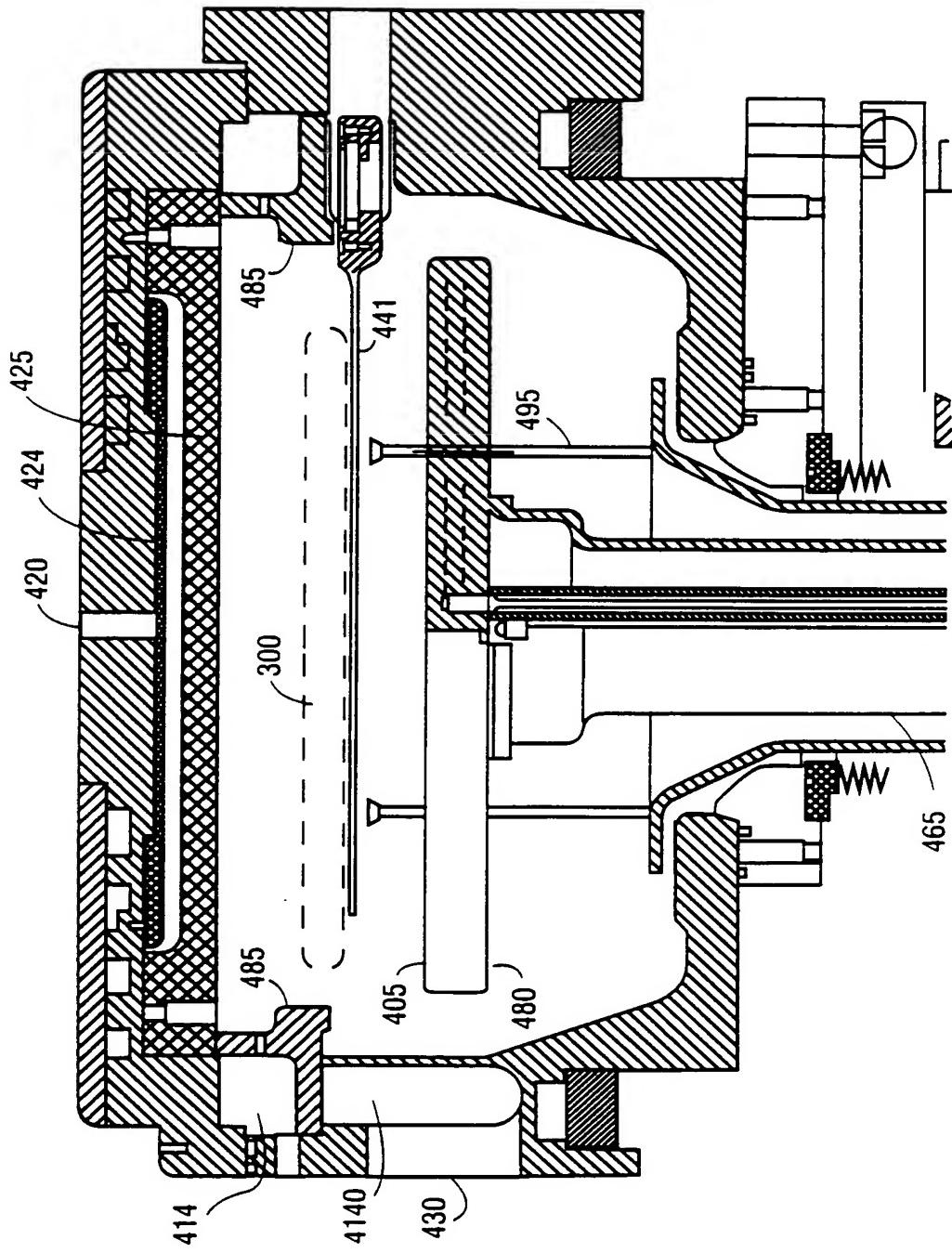


FIG. 6

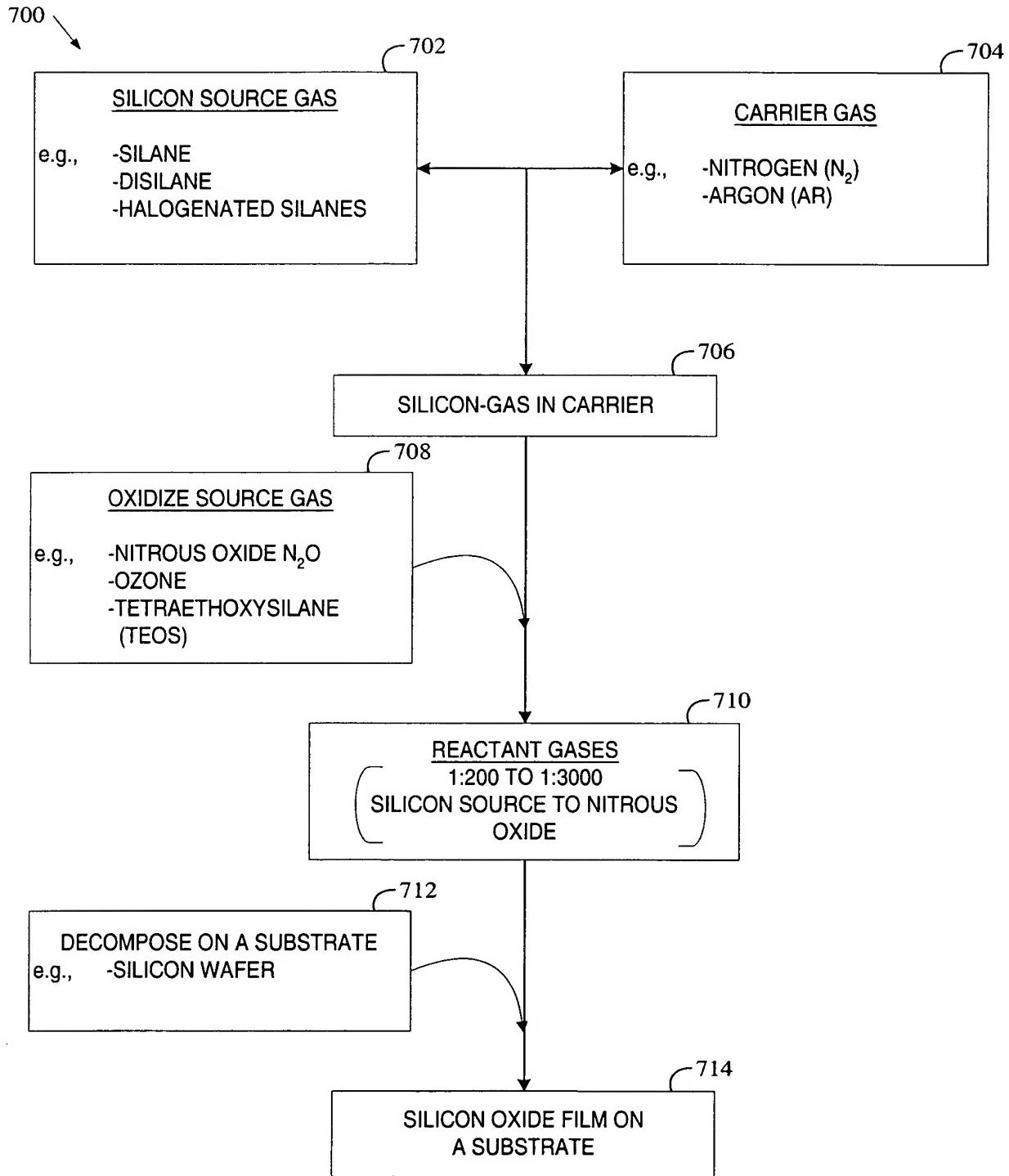


FIG. 7

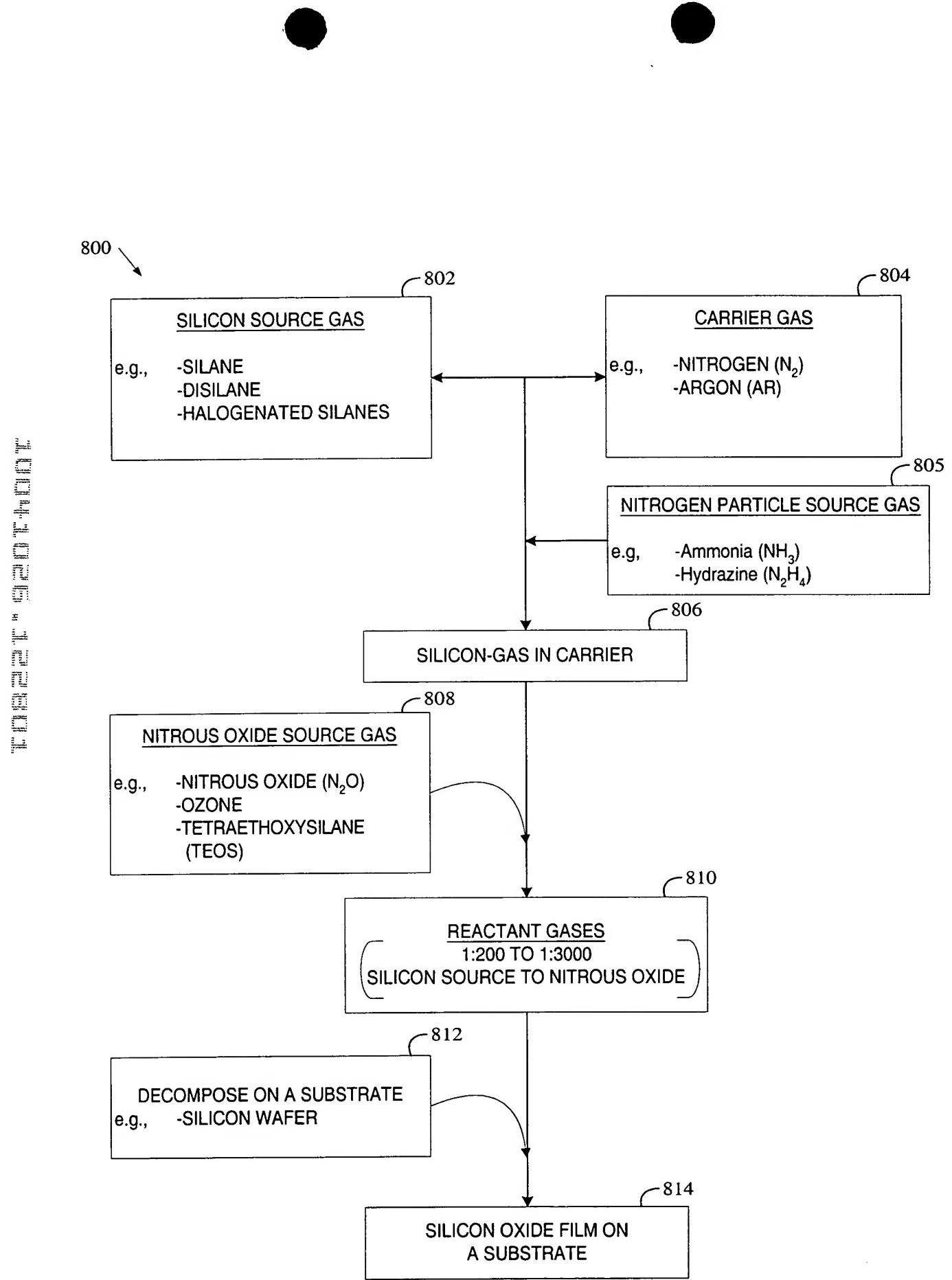


FIG. 8

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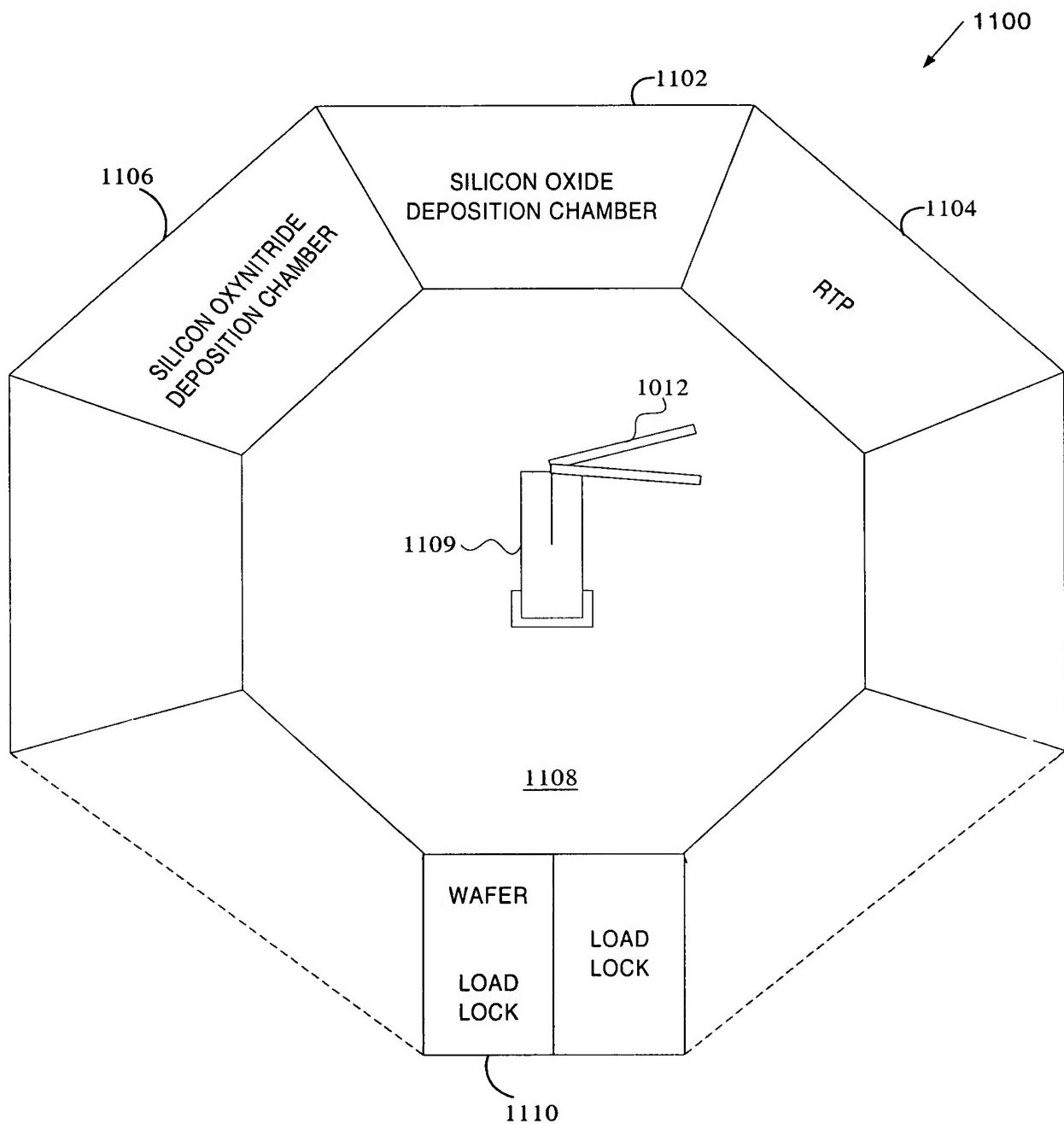


FIG. 9

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FIG. 10A

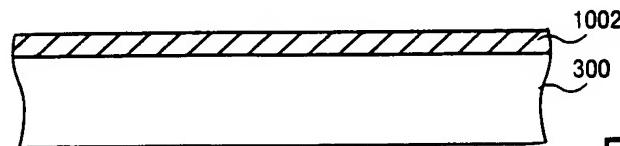


FIG. 10B

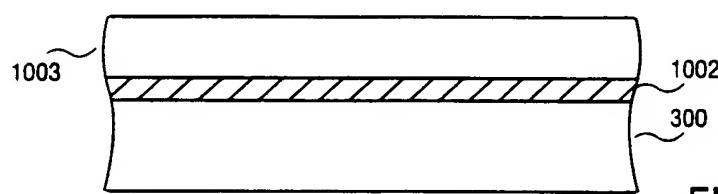


FIG. 10C

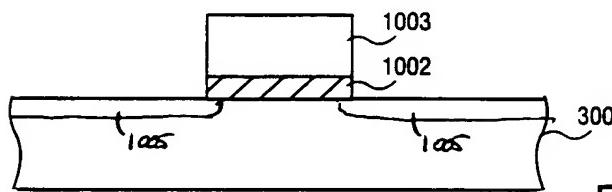


FIG. 10D

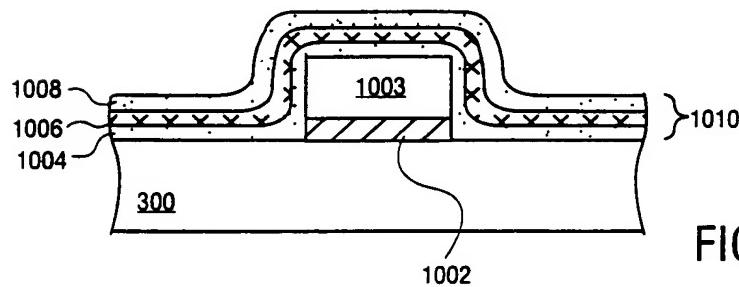


FIG. 10E

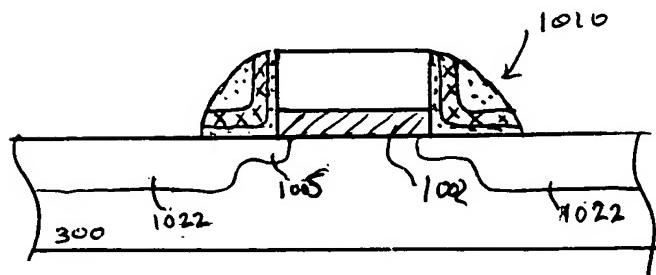
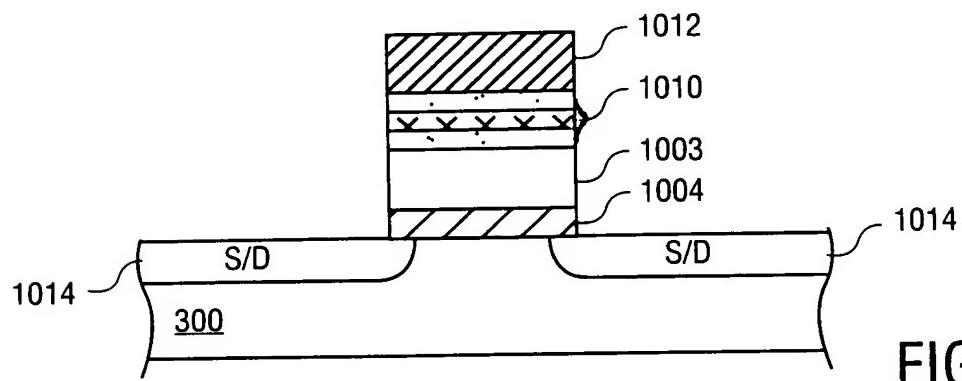
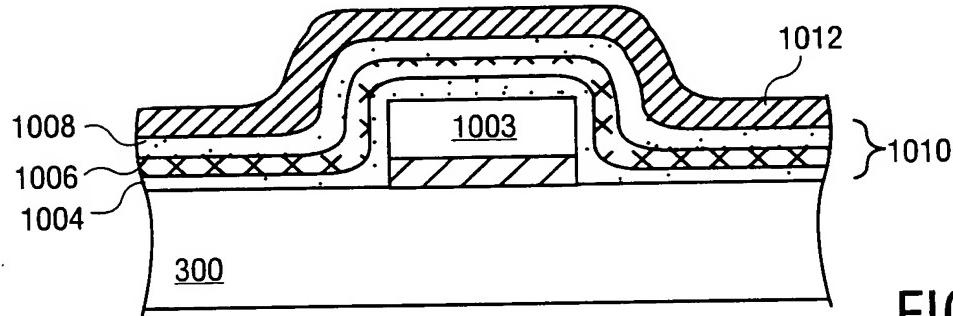
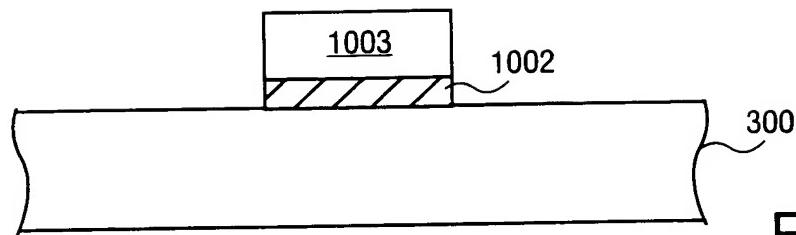
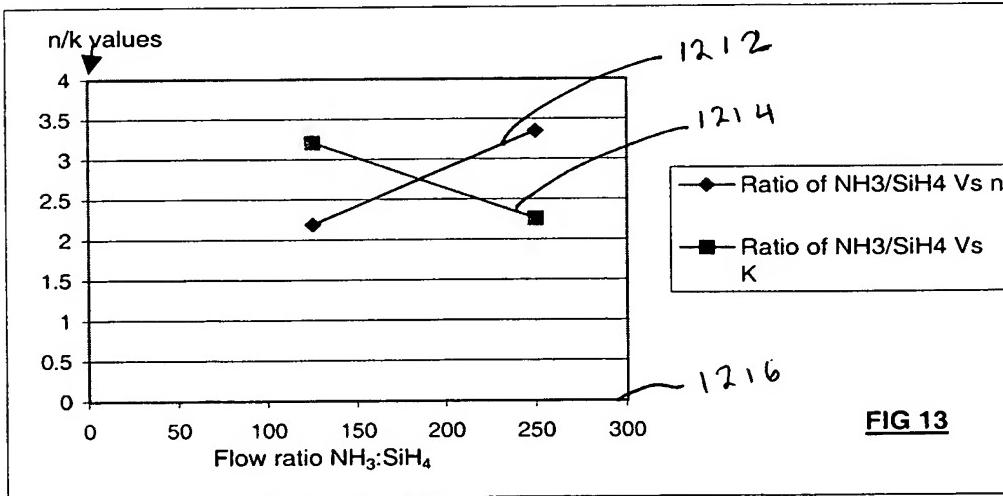
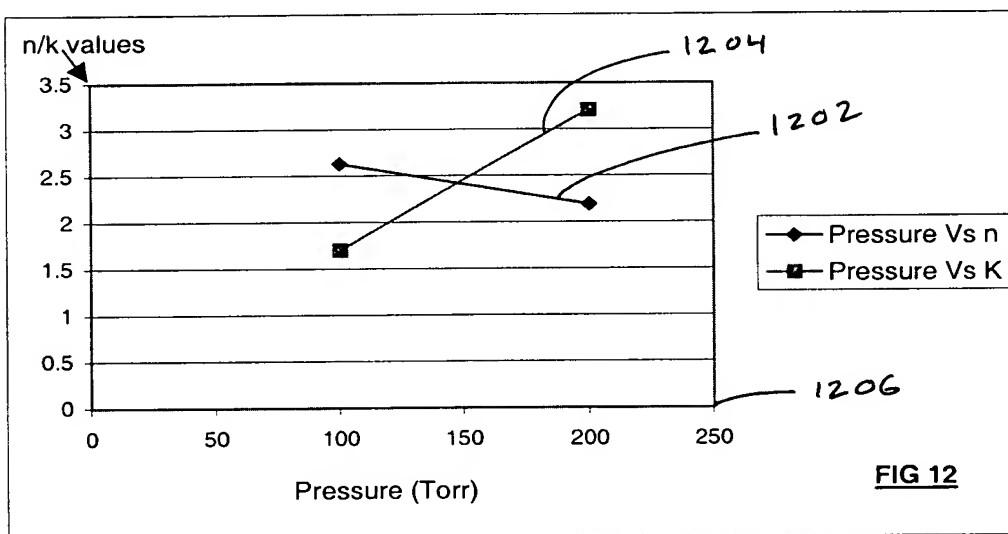
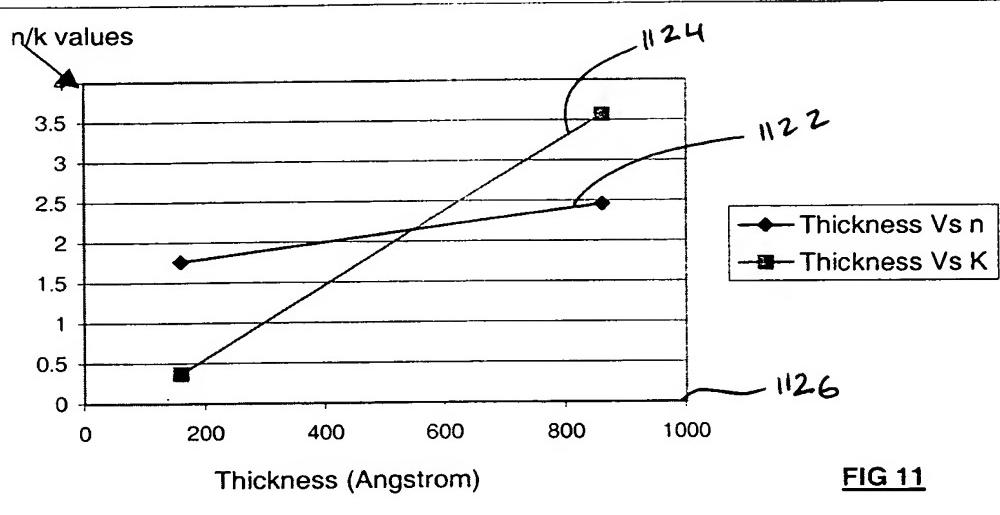


FIG. 10F

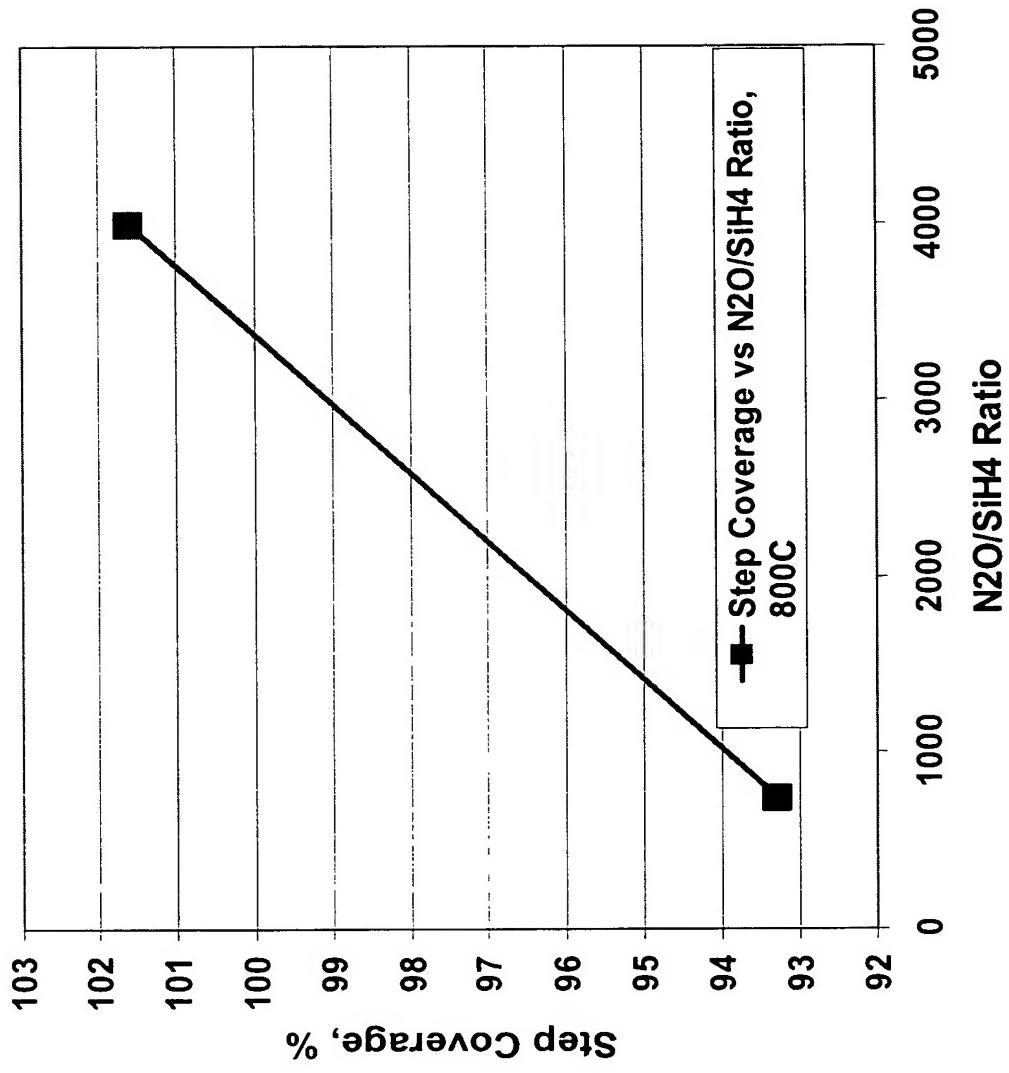
1000441020T420T010





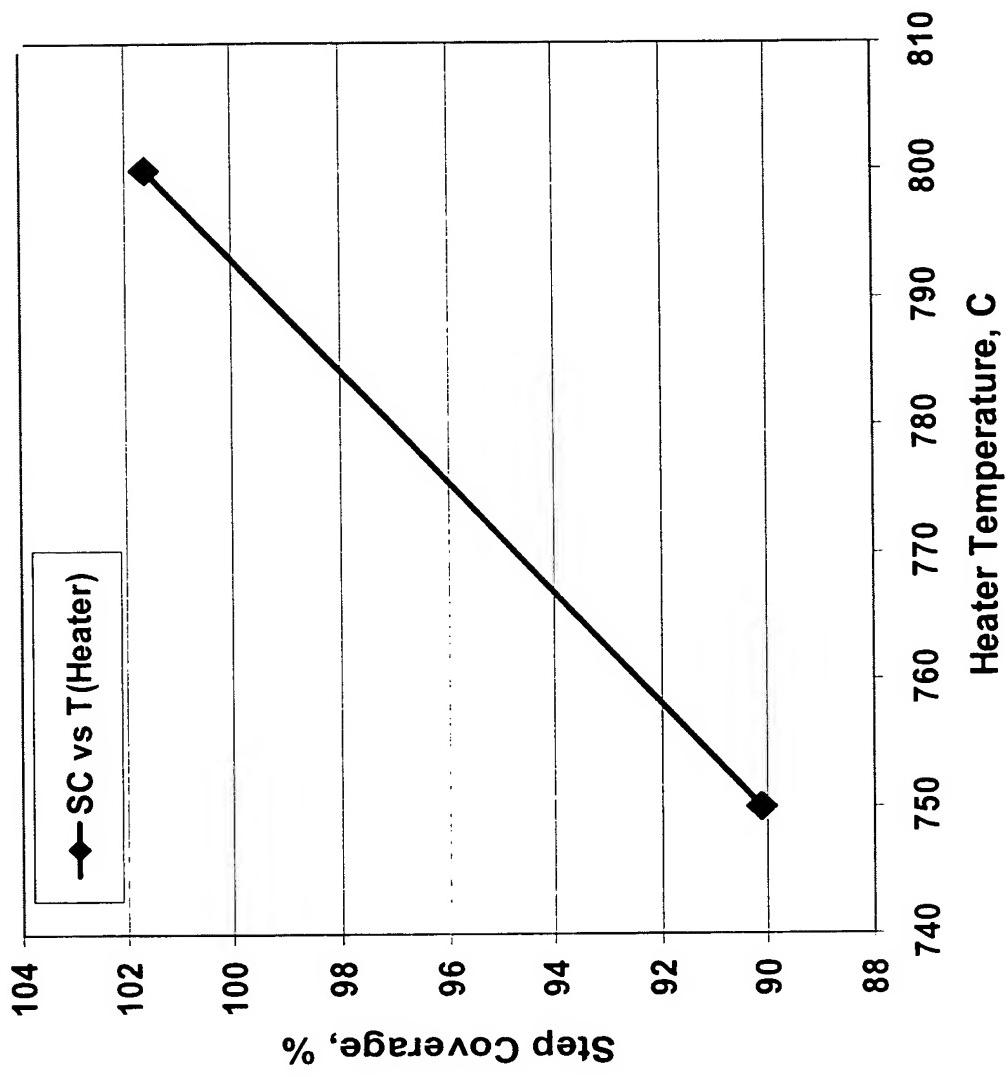
## Step Coverage vs N<sub>2</sub>O/SiH<sub>4</sub> ratio

**FIG. 14**



# Step Coverage vs Temperature

# FIG. 15



	<b>60Å Silicon oxide film</b>	<b>70Å Silicon oxide film</b>	<b>150Å Silicon oxide film</b>	<b>1000Å Silicon oxide film</b>
<b>1</b>				
<b>2</b>	<b>Pretreatment</b>			
Time	10 seconds	10 seconds	10 seconds	10 seconds
Temperature	750 °C	800 °C	700 °C	800 °C
Pressure	200 Torr	200 Torr	200 Torr	200 Torr
N <sub>2</sub> O into chamber	500 sccm	1200 sccm	1500 sccm	4000 sccm
SiH <sub>4</sub> divert line	1 sccm	2 sccm	2 sccm	20 sccm
SiH <sub>4</sub> into chamber	0 sccm	0 sccm	0 sccm	0 sccm
N <sub>2</sub> into chamber (carrier for SiH <sub>4</sub> )	5000 sccm	10000 sccm	5000 sccm	10000 sccm
N <sub>2</sub> into bottom chamber	4000 sccm	8000 sccm	4000 sccm	8000 sccm
<b>3</b>				
<b>3</b>	<b>Deposition</b>			
Time	40 seconds	44 seconds	53.2 seconds	75 seconds
Temperature	750 °C	800 °C	750 °C	750 °C
Pressure	200 Torr	200 Torr	200 Torr	200 Torr
N <sub>2</sub> O into chamber	500 sccm	1200 sccm	1500 sccm	4000 sccm
SiH <sub>4</sub> divert line	0 sccm	0 sccm	0 sccm	0 sccm
SiH <sub>4</sub> into chamber	1 sccm	2 sccm	2 sccm	20 sccm
N <sub>2</sub> into chamber (carrier for SiH <sub>4</sub> )	5000 sccm	10000 sccm	5000 sccm	10000 sccm
N <sub>2</sub> into bottom chamber	4000 sccm	8000 sccm	4000 sccm	8000 sccm
<b>4</b>				
<b>4</b>	<b>Posttreatment</b>			
Time	10 seconds	10 seconds	10 seconds	10 seconds
Temperature	750 °C	800 °C	750 °C	750 °C
Pressure	200 Torr	200 Torr	200 Torr	200 Torr
N <sub>2</sub> O into chamber	500 sccm	1200 sccm	1500 sccm	4000 sccm
SiH <sub>4</sub> divert line	0 sccm	2 sccm	0 sccm	0 sccm
SiH <sub>4</sub> into chamber	0 sccm	0 sccm	0 sccm	0 sccm
N <sub>2</sub> into chamber (carrier for SiH <sub>4</sub> )	5000 sccm	10000 sccm	5000 sccm	10000 sccm
N <sub>2</sub> into bottom chamber	4000 sccm	8000 sccm	4000 sccm	8000 sccm
<b>5</b>				
<b>5</b>	<b>Purge</b>			
Time	10 seconds	10 seconds	10 seconds	10 seconds
N <sub>2</sub> into chamber (carrier for SiH <sub>4</sub> )	5000 sccm	10000 sccm	5000 sccm	10000 sccm
N <sub>2</sub> into bottom chamber	4000 sccm	8000 sccm	4000 sccm	8000 sccm

TABLE 1: PARAMETERS FOR MAKING SILICON OXIDE FILMS